

IN THE CLAIMS:

Claims 1-3, 5-7, 12-15, 19-20, and 33-36 are amended. Claims 4, 8, 16-18, 21-32, and 37-39 are canceled. New claims 40 and 41 are added. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1. (Currently amended) A method of identifying row type ~~or Fusarium head blight (FHB) resistance~~ in a barley ~~or related Triticaceae plant~~, comprising the use of at least one molecular marker ~~shown in the linkage maps of FIGS. 1 and 2 comprising the nucleotide sequences set forth in any of SEQ ID NOs: 1 to 5~~, that is linked with a gene that controls row type.

2. (Currently amended) The method of claim 1, wherein ~~a test plant~~ the barley is identified as having two-rowed or six-rowed spikes when a molecular marker in the ~~test plant~~ barley shows the same type as a barley ~~or related Triticaceae plant~~ that is two-rowed or six-rowed, respectively.

3. (Withdrawn and currently amended) The method of claim 1, wherein the ~~test plant~~ barley is identified as FHB resistant or FHB susceptible when the molecular marker in the ~~test plant~~ barley shows the same type as a barley ~~or related Triticaceae plant~~ that is FHB resistant or FHB susceptible, respectively.

4. (Canceled).

5. (Currently amended) The method of claim 1, comprising the following steps (a) to (d):
- (a) preparing a DNA sample from a barley ~~or related *Triticeae* plant~~;
 - (b) digesting the prepared DNA sample with a restriction enzyme;
 - (c) separating the DNA fragments by size; and
 - (d) comparing the size of a detected DNA fragment with that of a control.
6. (Currently amended) The method of claim 1, comprising the following steps (a) to (d):
- (a) preparing a DNA sample from a barley ~~or related *Triticeae* plant~~;
 - (b) performing a PCR reaction using primer DNAs, with the prepared DNA sample as a template;
 - (c) separating the amplified DNA fragments by size; and
 - (d) comparing the size of a detected DNA fragment with that of a control.
7. (Currently amended) The method of claim 1, comprising the following steps (a) to (e):
- (a) preparing a DNA sample from a barley ~~or related *Triticeae* plant~~;
 - (b) digesting the prepared DNA sample with a restriction enzyme;
 - (c) performing an AFLP reaction using the digested DNA sample as a template;
 - (d) separating the amplified DNA fragments by size; and
 - (e) comparing the detected DNA pattern with that of a control.
8. (Canceled).

9. (Withdrawn) A reagent for identifying row type or Fusarium head blight (FHB) resistance in a barley or related *Triticeae* plant, comprising an oligonucleotide of at least 15 nucleotides that is complementary to a DNA comprising the nucleotide sequence set forth in any of SEQ ID NOS:1 to 5, or a complementary strand thereof.

10. (Withdrawn) A reagent for identifying row type or Fusarium head blight (FHB) resistance in a barley or related *Triticeae* plant, comprising an oligonucleotide comprising the nucleotide sequence set forth in any of SEQ ID NOS:6 and 7.

11. (Withdrawn) The reagent of claim 9, wherein the barley or related *Triticeae* plant is a barley.

12. (Currently amended) A method of generating an artificially altered barley ~~or related *Triticeae* plant~~ having two-rowed spikes, said method comprising the step of selecting, at an early stage, a plant identified as being two-rowed using the method according to claim 1.

13. (Currently amended) A method of generating an artificially altered barley ~~or related *Triticeae* plant~~ having six-rowed spikes, said method comprising the step of selecting, at an early stage, a plant identified as being six-rowed using the method according to claim 1.

14. (Withdrawn and currently amended) A method of generating an artificially altered barley ~~or related *Triticeae* plant~~ having a trait of FHB resistance, said method comprising the step of selecting, at an early stage, a ~~plant~~ barley identified as FHB resistant using the method according to claim 1.

15. (Withdrawn and currently amended) A method of generating an artificially altered barley ~~or related *Triticeae* plant~~ having a trait of FHB susceptibility, said method comprising the step of selecting, at an early stage, a ~~plant~~ barley identified as FHB susceptible using the method according to claim 1.

16.-18. (Canceled).

19. (Withdrawn and currently amended) A barley ~~or related *Triticeae*~~ plant with FHB resistance, generated by the method of claim 14.

20. (Withdrawn and currently amended) A barley ~~or related *Triticeae*~~ plant with FHB susceptibility, generated by the method of claim 15.

21.-32. (Canceled).

33. (Withdrawn and currently amended) A barley ~~or related *Triticeae*~~ plant, which is a progeny or clone of the barley or related *Triticeae* plant of claim 19.

34. (Withdrawn and currently amended) A reproductive material of the barley ~~or related *Triticeae*~~ plant of claim 19.

35. (Withdrawn and currently amended) A reproductive material of the barley ~~or related *Triticeae*~~ plant of claim 20.

36. (Withdrawn and currently amended) A barley ~~or related *Triticeae*~~ plant, which is a progeny or clone of the barley ~~or related *Triticeae*~~ plant of claim 20.

37.-39. (Canceled).

40. (New) A method of identifying row type resistance in barley, the method comprising:

utilizing at least one molecular marker to identify row type resistance in the barley, wherein the at least one molecular marker is selected the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:5.

41. (New) A method of generating an artificially altered barley having two-rowed spikes or six-rowed spikes, said method comprising the steps of:

selecting, at an early stage, a plant identified as being a two-rowed barley or a six-rowed barley by the method according to claim 1; and

artificially altering the barley having two-rowed spikes or six-rowed spikes,

so as to generate an artificially altered barley having two-rowed spikes or six-rowed spikes.